

WE CLAIM:

1. A manifold for a water purification system having a boiling tank, comprising:
a body having a water inlet port for connection to a water supply, a water exit port, a first fluid passage connecting the water inlet port to the water exit port, a drain inlet port for connection to the boiling tank, a drain outlet port, a second flow passage connecting the drain inlet port to the drain outlet port, and a third flow passage connecting the first flow passage with the second flow passage.
2. The manifold according to claim 1, wherein the second flow passage includes a longitudinal axis, and the third flow passage has a longitudinal axis that is disposed at an angle to the longitudinal axis of the second flow passage.
3. The manifold according to claim 2, wherein the angle is about 8 degrees.
4. The manifold according to claim 1, further including a valve connected to the body and configured to selectively control flow in the first fluid passage between the water inlet port and the water exit port.
5. The manifold according to claim 1, further including a valve connected to the body and configured to selectively control flow in the second fluid passage between the drain inlet port and the drain outlet port.
6. The manifold according to claim 1, further including a valve connected to the body and configured to selectively control flow in the third fluid passage between the first flow passage and the second flow passage.
7. The manifold according to claim 1, wherein the body includes first and second end surfaces, first and second side surfaces, and top and bottom surfaces; and the water

inlet port is formed in one of the first and second end surfaces, and the water exit port is formed in one of the first and second side surfaces.

8. The manifold according to claim 7, wherein the drain inlet port is formed in one of the top and bottom surfaces, and the drain outlet port is formed in one of the first and second end surfaces.

9. The manifold according to claim 8, wherein the drain outlet port and the water inlet port are formed in the same end surface.

10. A manifold for a water purification system having a boiling tank, comprising:
a body having a water inlet port for connection to a water supply, a water exit port, a first fluid passage connecting the water inlet port to the water exit port, a drain inlet port for connection to the boiling tank, a drain outlet port, a second flow passage connecting the drain inlet port to the drain outlet port, and means for creating a venturi effect in the second flow passage to produce a suction in the second flow passage and on the drain inlet port.

11. The manifold according to claim 10, wherein the means for creating a venturi comprises a third flow passage connecting the first flow passage with the second flow passage.

12. The manifold according to claim 11, wherein the second flow passage includes a longitudinal axis, and the third flow passage has a longitudinal axis that is disposed at an angle to the longitudinal axis of the second flow passage.

13. The manifold according to claim 12, wherein the angle is about 8 degrees.

14. A water purification system for purifying water from a water supply, comprising:

a boiling tank for boiling water from the water supply;
a condenser connected to said boiling tank for receiving steam from said boiling tank and for condensing the steam to form distilled water;
a distilled water tank connected to said condenser for collecting distilled water from said condenser; and
a manifold disposed between the water supply and said boiling tank, said manifold comprising a body having a water inlet port configured for connection to the water supply, a water exit port connected to the boiling tank, a first fluid passage connecting the water inlet port to the water exit port, a drain inlet port connected to the boiling tank, a drain outlet port, a second flow passage connecting the drain inlet port to the drain outlet port, and a third flow passage connecting the first flow passage with the second flow passage.

15. The water purification system according to claim 14, further including a control tank having an inlet connected to the water exit port and an outlet connected to the boiling tank.

16. The water purification system according to claim 15, wherein the outlet of the control tank is connected to the drain inlet port of the manifold.

17. The water purification system according to claim 14, wherein the second flow passage includes a longitudinal axis, and the third flow passage has a longitudinal axis that is disposed at an angle to the longitudinal axis of the second flow passage.

18. The water purification system according to claim 17, wherein the angle is about 8 degrees.

19. The water purification system according to claim 14, further including a valve connected to the body and configured to selectively control flow in the first fluid passage between the water inlet port and the water exit port.

20. The water purification system according to claim 14, further including a valve connected to the body and configured to selectively control flow in the second fluid passage between the drain inlet port and the drain outlet port.

21. The water purification system according to claim 14, further including a valve connected to the body and configured to selectively control flow in the third fluid passage between the first flow passage and the second flow passage.

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